

# Practice A

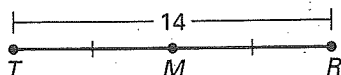
For use with pages 53–59

Complete the statement.

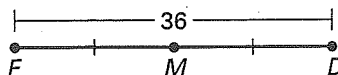
- The   ?   of a segment is the point on the segment that divides it into two congruent segments.
- A   ?   is a segment, ray, line, or plane that intersects a segment at its midpoint.
- To   ?   a segment means to divide the segment into two congruent segments.

**M is the midpoint of the segment. Find the segment lengths.**

4. Find  $TM$  and  $MR$ .



5. Find  $FM$  and  $MD$ .



6. Find  $MR$  and  $QR$ .

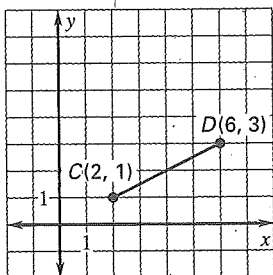


7. Find  $KM$  and  $KL$ .

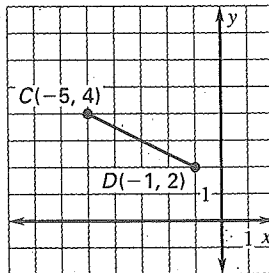


Use the Midpoint Formula to find the coordinates of the midpoint of  $\overline{CD}$ .

8.



9.



Sketch  $\overline{PQ}$ . Then find the coordinates of its midpoint.

10.  $P(0, 0)$ ,  $Q(6, -4)$

11.  $P(0, 8)$ ,  $Q(2, 6)$

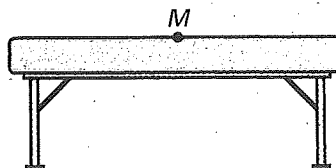
12.  $P(1, 2)$ ,  $Q(-5, 0)$

**M is the midpoint of  $\overline{AB}$ . Find the value of  $x$ .**

13.  $A$   $2x$   $M$   $18$   $B$

14.  $A$   $3x$   $M$   $24$   $B$

15. A balance beam is shown at the right. Your gymnastics routine includes a jump at the midpoint  $M$  of the beam. If the length of the beam is 500 centimeters, what is the distance from the end of the beam to the jump location?



# Practice B

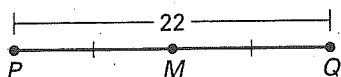
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Determine whether  $M$  is the midpoint of  $\overline{JK}$ . Explain your reasoning.

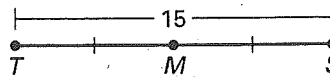


Find the segment lengths, given that  $M$  is the midpoint of the segment.

4. Find  $PM$  and  $MQ$ .

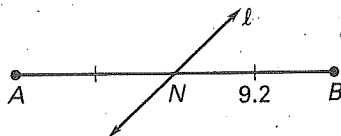


5. Find  $TM$  and  $MS$ .

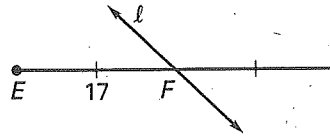


Line  $\ell$  bisects the segment. Find the segment lengths.

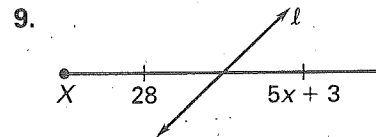
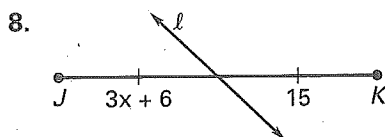
6. Find  $AN$  and  $AB$ .



7. Find  $FG$  and  $EG$ .



Line  $\ell$  bisects the segment. Find the value of  $x$ .



Find the coordinates of the midpoint of  $\overline{FG}$ .

10.  $F(-2, 3)$ ,  $G(4, -1)$

11.  $F(1, -5)$ ,  $G(4, -3)$

12.  $F(-6, 1)$ ,  $G(-2, 7)$

13.  $F(3, -2)$ ,  $G(4, -4)$

14.  $F(-1, 7)$ ,  $G(5, -2)$

15.  $F(-3, 6)$ ,  $G(-1, 2)$

16. You are planting flowers in a border that is 11 feet long. If you want to plant a large rosebush halfway along the border, how far is the bush from the ends of the border?

